

DRAFT
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Response to CPSC Inquiry from Dr. Ray

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No vermiculite product of CPD contains commercial asbestos. Asbestiform tremolite can be present in minute quantities as a naturally occurring contaminant. Over the past few years, CPD has taken steps to reduce the level of tremolite contaminant in its end products to the lowest practical level.

Most asbestiform tremolite is removed first in the vermiculite ore milling operation where wet flotation and wet screening are the primary modes of separation. Over the past two years, additional scrubbing steps have been added and all very fine sized fractions, which tend to be richer in the tramp tremolite mineral, are disposed of rather than returned to finished product. Following the milling operation, vermiculite ore is shipped to expanding plants where it is exfoliated. As a part of the exfoliation process, air flows countercurved to the flow of vermiculite, resulting in separation of the small fine particles of abesti-form tremolite through a process of elutriation. The product then passes over a vibrating table where further separation occurs and heavier particles which may contain some tremolite bundles are removed. Finally, we have introduced a final product screening step in which any remaining fine residues are removed from the product. The fine fractions from this additional screening operation, overheads from the elutriation step, and cyclone overheads along with baghouse filter fines are disposed of rather than returned to the finished products, as previously practiced.

Tremolite present in finished products made from Libby vermiculite concentrate is fibrous but in minute quantities by the time finished consumer

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products reach the market. Concentrations of asbestiform tremolite in our consumer products are less than a tenth of a percent (0.1%)

Tremolite in finished products derived from South Carolina vermiculite is primarily a platy form with the asbestiform tremolite again being less than a tenth of one percent (0.1%) in finished consumer products. Measurements of these low levels of tremolite contaminant are extremely difficult and are at the lower limit of conventional asbestos analytical test reliability. In most cases, a commercial laboratory would not be able to detect the presence of asbestiform tremolite in the finished product.

With respect to the release of fibers, it is possible that small amounts of fibers can be released depending upon the product and its pattern of use by the consumer. In all cases exposure levels are significantly below the OSHA criteria of 2.0 f/cc for an 8-hour time weighted average exposure.

Specific exposures measured vary with the pattern of use of our consumer products and are typically quite low as follows:

1. In horticultural uses, exposures are below reliably detectable levels. That is, less than 0.1 f/cc TWA.
2. In Attic Insulation, exposure is less than 1.0 f/cc 8-hour TWA and typically around 0.4 f/cc TWA. Such exposure to consumer users would typically be on a once or twice in a lifetime basis and not a continuous or regular use. After installation, there is no continued exposure from the use of the product.
3. Pool Base is the only other consumer product which we sell. In this case, the product is used outdoors where good ventilation insures exposures well below those of our other consumer products which may be used in confined areas.